

NOISE RESISTANT LOW PHASE NOISE, FREQUENCY TRACKING OSCILLATORS  
AND METHODS OF OPERATING THE SAME

ABSTRACT OF THE DISCLOSURE

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To secure the benefits of a low phase noise, wide tune range SAW oscillator in noisy environments, the tunable two port SAW resonator circuit within the oscillator is employed in differential mode, connected to a differential amplifier circuit to create a differential oscillator. In the absence of any need for ground or power supply voltage level references, low phase noise/edge jitter is maintained even in hostile environments while providing sufficient tune range to track small frequency changes. The resulting differential mode SAW oscillator is thus well-suited for use, for instance, in clock recovery within SONET applications.